

University News

SNDT Varsity Convocation



Shri P.V. Narasimha Rao, Union Minister for Human Resource Development, delivering the Convocation Address at the SNDT Women's University, Bombay.

BHOPAL UNIVERSITY**BHOPAL****ADVERTISEMENT NO. 1/86**

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Editor :

M.S. RAMAMURTHY

New Education Policy

AIU's Recommendations on Higher Education

The General Body of the Association of Indian Universities met in a Special Session in New Delhi on January 8-9, 1986 to finalise its recommendations for New Education Policy. The recommendations as adopted at the special meeting are reproduced below for wider circulation.

1. Objectives of Higher Education

1.1 The primary objective of higher education, as a vital instrument of change, should be to facilitate the process of national development through its many-fold task of generation, dissemination, utilization and expansion of knowledge. Specifically, the goals of higher education should be :

(i) to cultivate and inculcate values of humanism so as to promote tolerance among the diverse groups (social, cultural, ethnic and religious), the ultimate aim of which should be to foster and strengthen the spirit of national integration, international understanding, social responsibility and faith in future of the country;

(ii) to nurture and encourage scientific temper among people and to acquaint them with recent advances in science and technology so as to enable them to enhance quality of life and cope with the challenges of a changing society; and

(iii) to inspire and instil innovative and creative thinking among the students in order to enable them to contribute positively towards national development.

1.2 In order to accomplish the aforesaid objectives, higher education needs to be invested with dynamism and a new sense of purpose. Consequently, fresh thinking is required in order to prepare agenda for action for higher education incorporating strategy for implementation as regards planning and management, economy and accountability, financing, quality and content, and course structure.

2. Planning and Management

2.1 Planning Strategy

Planning strategy should be evolved to minimise inequalities in education, enhance quality of education, maintain national and international standards and establish relevance of education to societal needs. It should stress the strengthening and consolidation of the formal system in terms of quality of education as well as expansion of distance education for providing greater accessibility and national coverage. Moreover, formulation of plans for expansion of higher education should be based on manpower requirements of various sectors of development of the country.

2.2 Management Aspects of Higher Education

2.2.1 Keeping in view the fact that education is now in the Concurrent List of the Constitution, it is proposed that education upto first degree level should be the responsibility of the

States while postgraduate and professional education should be entrusted to the Centre.

2.2.2 The rapid expansion of higher education in India demands that efforts should now be made to consolidate the gains from such expansion through the provision of adequate facilities to the existing institutions. New universities should be set-up only when the needs for these are established through feasibility studies and special attention should be paid to socially and economically backward areas.

2.2.3 The UGC should exercise its authority to review periodically the functioning of the universities and de-recognise degrees of universities which do not maintain standards.

2.2.4 In order to ensure high quality of education, the UGC must strengthen and expand its monitoring system for periodic and rigorous assessment of university programmes. The UGC must ensure that its funds are being optimally and functionally utilized and the universities are pursuing, in letter and spirit, the educational policies and programmes laid down by the Commission.

2.2.5 The UGC should further strengthen and expand its programmes for developing centres of Excellence which should be funded on cent per cent basis by the Commission on a continuing basis.

2.2.6 There are many well-established colleges in the country which could be given autonomous status. This would greatly enhance their performance.

2.2.7 Despite the acceptance of the concept of autonomous colleges, not much progress has been made in this direction. These colleges are meant to be nodal centres of educational innovation and transformation. Autonomous colleges should be established systematically and extensively as a network of educational centres of excellence at district level.

2.2.8 Over 2000 non-viable colleges with enrolment of less than 200 students each are spread in rural areas of the country. Since no single solution can be applied to these non-viable colleges, each college should be treated as unique and appropriate measures should be devised keeping in view the generic of the area. For

instance, those colleges which have long-term social relevance, e.g. colleges located in backward and tribal areas, should be strengthened by way of providing adequate funds and physical facilities. Others could be converted into community colleges and study centres for non-formal education.

2.2.9 During an academic session, the number of working days in an educational institution should not be less than 180 days as stipulated by the UGC. Periodic assessment of the implementation of this norm should be made.

2.2.10 The tenure and service conditions of a Vice-Chancellor should be statutorily defined. The tenure of a Vice-Chancellor should normally be five years and non-renewable. During the tenure of a Vice-Chancellor, he/she should not be removed except through a judicial enquiry conducted by not less than a person of the status of a High Court judge.

2.2.11 Depoliticization of education in colleges and universities is imperative for cleansing academic environment so as to create healthy climate for learning and work. Interference by political parties is deemed as unwarranted intrusion in the functioning of universities. Such interference should be discouraged. In the interest of healthy national development, political parties should discipline themselves not to interfere in the affairs of the university in order to ensure its sanctity and smooth functioning.

2.2.12 While the maintenance of discipline in the campus is the concern of university authorities, the Central/State government cannot be absolved of the responsibility of lending full support to university administration for maintaining law and order in university campus.

3. **Autonomy and Accountability**

3.1 Autonomy and accountability of universities are inevitably interlinked. In order to ensure their autonomy, universities should be fully accountable to the society and responsive to the societal needs. Universities have to be developed as centres of excellence and should maintain the highest standards of teaching and research. In order to perform this role, university autonomy

needs to be safeguarded in all respects, particularly from political interference. To this end, all University Acts need to be reviewed. Necessary amendments for preserving and strengthening the autonomous character of the university should be incorporated in the Acts.

3.2 The role of the Chancellor should be non-political. He should protect the university from political interference and safeguard its autonomy.

3.3 The Pro-Vice-Chancellor, wherever the post exists, should be appointed with the consent of and on the recommendation of the Vice-Chancellor and his tenure should be co-terminus with that of the Vice-Chancellor.

3.4 Since education is under Concurrent List of the Constitution, the Central Government should lay down statutory provisions (by an act of Parliament) regarding university autonomy and status of Vice-Chancellor of all the universities. The relevant provisions should be incorporated in all the University Acts by Central State legislation.

3.5 Decentralization of functions within the university system is recommended so that the Vice-Chancellor is not burdened with routine administration. However, decision making at the faculty and departmental levels should be through committees chaired by the Pro-Vice-Chancellor or Dean or Head of Department.

4. Teacher's Status and Responsibility

4.1 A teacher should not be appointed unless he fulfils the recruitment norms of the UGC. At least 25 per cent teachers should be drawn from other universities so as to encourage mobility and avoid inbreeding.

4.2 A Code of Professional Ethics should be devised and enforced with a view to ensuring teacher's accountability. Provision should be made in university regulations for adequate incentives and rewards for conscientious and competent teachers. University regulations should also provide for punitive action, including removal of defaulting teachers.

4.3 In order to attract the best talent to the teaching profession, the pay scales and other benefits like housing, provident fund, etc. for the teachers should be equal to the all-India services of the Central Government.

4.4 Since teachers are regarded as kingpin of educational system, professional development of

teachers should receive special consideration of the policy planners. Hence, teachers' education should receive top priority with special emphasis on pre-service and in-service training through staff colleges. Credits earned through such training programmes should constitute an important part of assessment of teachers for confirmation and promotion.

5. Financing of Higher Education

5.1 Since the development of human resources is crucial for the growth of national economy and productivity, Government must allocate adequate funds to enhance the quality of higher education. It is observed that, in real terms, there has been a decline in per pupil expenditure on higher education in the last three decades. Since higher education provides professional, managerial and skilled manpower for all sectors of development, it is imperative to earmark a reasonably high level of funding for higher education, as suggested below:

(i) The allocation of funds for education should be raised from prevailing level of 3.7 per cent to 6 per cent of the Gross National Product, as recommended by the Education Commission (1964-66).

(ii) Plan allocation has, over a period of time, come down from 7 per cent of the total plan outlay in the First Plan to about 3 per cent in the Seventh Plan. This trend should be reversed and the level of Plan allocation should be restored to at least 7 per cent as obtained in the First Plan period.

(iii) In budgeting for higher education, its legitimate needs for funds should be adequately provided for. It must be realized that higher education is capital intensive and it is responsible for providing skilled manpower to all sectors of national development. It should be given special consideration and plan allocation for higher education should be raised to 25 per cent of the education budget as obtained in the Fourth Plan.

5.2 The development grants, given to the State universities by the UGC, should be on 100 per cent basis even in respect of capital expenditure. As regards maintenance expenditure of colleges and universities, suitable norms should be evolved for meeting their requirements and

funds should be accordingly provided. While evolving norms, cost escalation factor should be duly taken care of.

5.3 In the allocation of funds, qualitative strengthening of existing institutions should receive priority over expansion, and encouragement should be given to such teaching programmes that would entail optimum utilization of existing facilities.

5.4 Since the task of providing higher education in different areas of specialization and to an increasingly large number of aspirants is wide and complex, and as the resources of the nation are limited, Government should welcome the participation of voluntary organisations in establishing and promoting institutions of higher learning, particularly of innovative kind. This should not lead to dilution of norms and standard of higher education which ought to be jealously guarded.

5.5 Charging of capitation fee in all types of institutions of higher learning should be banned.

5.6 An appropriate policy should be devised to subsidise students' studies through scholarship and loan facilities rather than subsidizing institutions.

5.7 Financial autonomy of the universities should be ensured. They should not be fettered with rigid financial rules and regulations of the Centre/State Government. The universities should have full freedom to utilize their plan and non-plan grants according to their academic development programmes. This will enable them to emerge as centres of excellence.

5.8 It is observed that there are wide variations in per pupil expenditure on higher education in different universities. This results in wide disparities in the levels of academic standards. It is desirable therefore to prescribe norms for "per pupil expenditure" to ensure minimum level of funding of universities.

6. Content and Structure of Courses

6.1 The content of higher education and structure of courses should be so designed as to help in realizing the societal objectives. Undergraduate courses should be restructured in response to and in conformity with the manpower needs and aspirations of the nation. In this context, suitable guidelines for Core Curricula (foundation courses, work-based training, pro-

fessional orientation courses, social services, etc.) should be laid down by the UGC in consultation with teachers and experts in various professions and trade. In fact, it should be ensured that when an undergraduate student passes out of a university, he/she would have acquired some professional skill.

6.2 The courses of study should be restructured in such a way that rigidity gives way to a flexible system. A student should have the option to select such combination of courses as suited to his aptitude, talent and aspirations.

6.3 As the present examination system in many respects is outdated, it needs to be suitably modified. A system should be devised for effective and continuous evaluation of student performance.

6.4 10 + 2 + 3 system of education should be continued and implemented uniformly throughout the country.

6.5 Delinking of degrees from jobs is not desirable. Instead, structure of courses should be so oriented that the nexus between degrees and jobs is strengthened and the fresh graduates are more suited to the employment market.

7. Professional and Technical Education

7.1 For all professional and technical education, central nodal agencies like the All India Council of Technical Education, the Medical Council of India, etc. should be so strengthened as to plan, finance and monitor activities in their respective areas of education. These councils should have adequate representation from State governments, industry (private and public), professional bodies, etc.

7.2 Manpower Forecasting has been an area of weakness in our planning strategies. A Manpower Forecasting Cell should be created in the Ministry of Human Resource Development to forecast manpower requirements and to manage the flow of professional and technical graduates needed by various sectors of development.

8. Distance Education

8.1 Distance education should be developed as an alternative system of education with a view to providing greater accessibility to wider sections of society aspiring for higher education.

8.2 Each State should have open learning system at two levels—open school and open university. However, such institutions should not be established in haste. A great deal of care should be exercised in the preparation of courses for open learning system. Also, adequate funding should be ensured for maintaining standards of correspondence education.

8.3 With the establishment of open learning system, the prevalent practice of private candidates taking university examinations for obtaining degrees/diplomas should be discontinued,

8.4 Inter-system mobility of students from formal

to non-formal education and vice-versa should be made possible.

8.5 The Indira Gandhi National Open University should provide linkages with State level open universities and the institutes of correspondence courses in various universities.

9. Implementation

9.1 The success or failure of the recommendations is inevitably linked with the strength of will and determination on the part of the decision makers. Unless the political will is there to implement the recommendations, it may turn out to be an exercise in futility. □

CALENDAR OF EVENTS

Proposed Dates of the Event	Title	Objective	Name of the Organising Department	Name of the Organising Secretary/Officer to be contacted
March 9-11, 1986	All India Seminar on Technical Education in India	(i) To provide a forum for discussing the present status of technical education in India ; (ii) To identify the current problems and suggest ways and means for overcoming the same.	The Institution of Engineers (India) & the Institute of Engg. & Technology, Lucknow	Dr. Suresh Chandra, Director, Institute of Engg. & Tech., Lucknow
May 2-15, 1986	Summer School on Crystal Growth, Characterisation and Device Fabrication	An orientation course in (i) Experimental Crystal Growth; (ii) Theories of Crystal Growth; (iii) Nucleation; and (iv) Characterisation	Crystal Growth Centre, Anna University, Madras	Dr. P. Ramasamy, Crystal Growth Centre, Anna University, Madras
May 8-10, 1986	National Seminar on Interaction between research in Universities and Industries	To identify the industries where University research can play an important role and find out ways and means of active interaction between research in Universities and industries	University of Delhi, Delhi	Dr. Yogesh Kumar, Department of Physics and Astrophysics, University of Delhi, Delhi
May 19-June 1, 1986	Summer School on Crystal Growth and Characterisation of Advanced Materials for Solid State Applications	An orientation course in (i) Experimental Crystal Growth; (ii) Theories of Crystal Growth; (iii) Nucleation; and (iv) Characterisation	Crystal Growth Centre, Anna University, Madras	Dr. P. Ramasamy, Crystal Growth Centre, Anna University, Madras

UNIVERSITY OF ROORKEE

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Dated : Feb. 12, 1986

(LAKSHMIPAT SINGHANIA MEMORIAL CHAIR)

Applications are invited for the post of PROFESSOR to fill the LAKSHMIPAT SINGHANIA MEMORIAL CHAIR created from the donation received from M/s. Straw Products Limited, New Delhi for a period of 3 years, at the INSTITUTE OF PAPER TECHNOLOGY (UNIVERSITY OF ROORKEE) SAHARANPUR. The Professor is expected to promote academic activities in the field of Pulp, Paper, Recovery, Design, Maintenance and Management and other areas related to the Paper Industry. **He will be receiving a consolidated salary of Rs. 4000/- per month and will be provided with a rent free unfurnished residential accommodation in the campus of the Institute.** He will be expected to teach regular classes in the area of his specialisation at the Institute of Paper Technology, Saharanpur and will be required to guide the projects of senior students, conduct seminars and prepare the class room materials for the development of the degree and diploma courses. He will also be expected to initiate and guide research on problems of Paper Industry.

The expert should be a first class graduate in Engineering preferably in the areas of Paper, Pulp/Chemical Engg. or M.Sc./M.Tech. in the areas of Cellulose Chemistry/Pulp and Paper Science. Higher academic qualifications will be preferred. He should be below 60 years of age and should have a minimum experience of 15 years in conduct and guidance of Research/Teaching/Consultancy/Plant operation in the fields of Pulp, Paper and Recovery.

Applications giving complete bio—data and a passport size photograph may be made on plain paper and sent to the Registrar, University of Roorkee (U.P.) by 15th March, 1985.

REGISTRAR

Strengthening NSS in Colleges/Universities

M. P. Gupta*

Nearly 90 per cent of the rural population in India is beset with problems like poverty, ignorance, illiteracy, resourcelessness, superstitions, beliefs, etc. Therefore the need of the time is the rapid socio-cultural transformation of rural India. It is the rural people who need to be motivated for attitudinal changes which is a pre-requisite for our country's development. In this gigantic task youth have to play a vital role to foster development by rendering technical and social services. They are a dynamic force and constitute about one-third of our country's population. But our system of higher education does not inculcate among youth rational attitudes towards life and work in rural areas, rather it develops a disdain for manual work. The University Grants Commission in its 'Development of Higher Education in India: Policy Frame' (1978) observed that "If the University System has to discharge its responsibilities adequately to the entire educational system and to the society as a whole, it must assume extension, as the third important responsibility and give it the same status as teaching and research". In this direction significant endeavours have been made in Agricultural Universities/Institutions by introducing Extension Education as a discipline in instructional programme.

National Service Scheme

A National Service Scheme was launched on a country wide basis in colleges/universities in 1969, in a bid to provide youth with opportunities for social services. At present, this scheme is in operation in 2,742 colleges with an enrolment of more than three lacs of volunteers. Keeping in view the importance of youths' involvement in rural uplift, it is highly imperative to reorient and strengthen NSS in Colleges/Universities. Himachal Pradesh Agricultural University has made pioneering efforts in integrating students' extension training with NSS programme.

In order to gear-up NSS to channelise the energies

of youth for rural development, the following specific objectives have been delineated:

1. To provide opportunities to the volunteers for studying rural problems, suggest solutions, plan programmes of action and undertake project activities;
2. To develop skill and confidence among volunteers for using the theoretical knowledge in real life situations; and
3. To develop among volunteers dignity of labour, social consciousness and commitment and helpful attitudes towards the rural community.

Institutional and infrastructure support should be provided to fulfil these objectives of N.S.S.

1. NSS and curriculum : In designing curriculum, students should be given opportunities for education through service. The requirement of 120 hours of social service over and above the service rendered in NSS Special Camping programme should be strictly adhered to by the teacher Incharge. An NSS Practical Manual giving tips on Agriculture, Engineering, Health Education etc., should be developed to serve as ready reference for volunteers to meet the needs of society and in solving their problems. The NSS should be treated at par with N.C.C. programmes in colleges/universities and the students should be given the option of undergoing either of the two as a requirement for a degree.

2. Incentives for rural work : Volunteers should be awarded merit certificates, college/university colours, medals etc. on the basis of their performance in NSS projects. Preferential treatment should be given to NSS volunteers in matters of admission to teaching programmes and recruitment in services. NSS Officers should also be honoured for dedicated and meritorious services.

3. Collaboration with development departments : The university and colleges should have collaboration with departments like Agriculture, Rural Development, Animal Husbandry, Health, Power and Works etc. for obtaining tangible results under NSS Programme.

*Associate Professor, H.P. Agricultural University, Palampur.

The NSS volunteers can also help people from weaker sections of the society in getting assistance from Banks, Antodaya Programme, Integrated Rural Development Programme, Small Farmers' Development Agency, Tribal and Backward Classes Development Programme, etc.

New Methodology

On the basis of personal experience, review of NSS bulletins and discussions with NSS Programme Coordinators, the following guidelines are suggested for conducting regular NSS activities and special camping programmes.

A. Regular Activities : A definite plan of work with respect to (i) what is to be done? (ii) How it is to be done? (iii) When it is to be done? (iv) Where it is to be done? should be developed for regular NSS activities. The volunteers as per schedule should visit village(s) in the vicinity of the university/college under the guidance and supervision of the Programme Officer NSS, to impart 'know-how' and to help ruralites get over poverty and social evils. Further, in order to enable volunteers to complete the requirement of 120 hours of social service, single Day-Camps may also be organised.

B. Special Camping Programme : To serve problem areas in village(s), 10-day special camps like 'Youth for afforestation', 'Youth for rural reconstruction', etc. may be organised during Trimester/Semester break and summer vacations. A few practical guidelines for organising NSS Camp are given below:

(i) Adoption of Village : For sustained efforts and to create an impact of the NSS programme, it is advisable to concentrate on a village.

The selected village should be situated in a remote area and should be comparatively backward. As far as possible, stay arrangement for campers should be made in tents in open fields in the village itself. The village should be visited personally by the Programme Officer who should discuss with the programme Coordinator NSS and the college Principal before finalisation. If the village is small, especially in hilly areas, a cluster of adjoining villages may be used as areas of operation for NSS Camp.

(ii) Grouping of Volunteers: 40-50 volunteers (including 10% local youth) can be handled successfully by a Programme Officer in an NSS Camp. The volunteers may be asked to form themselves in groups of 9-10

and one volunteer be nominated as a leader in each group. These groups may be assigned areas in selected village(s) to give complete coverage in respect of the specified projects with active co-operation of the local leaders, youth and children.

(iii) Project Activities: A variety of social, economic, recreational and cultural projects may be undertaken on a campaign basis during camp to provide volunteers with varied experience of team work. Projects related to women folk should also be arranged by girl volunteers. Some of the important community service projects (both for boys and girls) are : Village link-roads, drains, school, panchayat ghar, library, dispensary, play-grounds, literacy class, soil erosion, tree plantation, etc.

(iv) Orientation of NSS Volunteers : The camp may start with pre-orientation session wherein resource personnel like Vice-Chancellors, Deans/Principals, Students Welfare Officers, etc. may be invited to highlight the role of youth in rural reconstruction and the purpose of NSS camp to the participating volunteers.

(v) Camp Programme : The work schedule indicating the date, time, activities to be carried out and necessary inputs may be provided to volunteers in groups. Each group may be required to prepare the 'plan of work' in consultation with the programme officer keeping in view the local conditions and the proposed projects to be undertaken. The specified working timings may be 7.00 Hrs. to 12.00 Hrs in the forenoon and 15.00 Hrs to 18.00 Hrs in the afternoon. Detailed instructions for the projects may be supplied to volunteers in the form of a cyclostyled NSS practical manual and on the spot guidance and help through Programme Officers/teacher supervisors. Besides, Dean/Principal, Students Welfare Officer and University experts should pay visits to villages to inspect and encourage volunteers in their project activities.

(vi) Concluding Function : On the concluding day of the camp, 'Kisan Mela'—a fair of farmers, farm-women, youth may be organised wherein answers to farm and home related problems may be given by the Scientists of the University/resource personnel and the volunteers may help the audience in taking short notes. Local leaders may be asked to give their impressions about the volunteers' work in rural areas. To make this programme colourful, recreational items may be given by NSS volunteers with the involvement of school children. □

Shri Narasimha Rao Addresses Convocation of SNT Women's University

Excerpts from the Convocation Address delivered by Shri P.V. Narasimha Rao, Union Minister for Human Resource Development, at the 35th Convocation of the SNT Women's University held on February 11, 1986.

"...What is the biggest challenge facing Women's education today? If education could be instrumental in bringing about real equality between men and women, I would consider that as the greatest achievement. That sums up the challenge, in other words. It is not a question of law, but of hard reality. The Indian Constitution has proclaimed that there shall be complete equality between the sexes. But the Indian Society, and I suspect many other societies, still do not accept that the girl child and the boy child are born equal. Discrimination begins at birth and continues right through life.

social change. In order to neutralise the accumulated distortion over a period, a well-conceived edge in favour of the woman would have to be considered. This is not to be a gimmick, such as was depicted disparagingly in a Hindi film named 'Uthi Ganga' several decades ago. It has to be an act of faith and social engineering.

The main question to be answered is whether education ALONE can act as an effective agent of change in the case of the woman. Woman's access to education today is restricted in many ways. Suppose

Convocation

This discrimination shows itself in various social, economic and cultural indicators. Adverse female-male ratio, higher female infant and child mortality, lower female enrolment in school, higher rate of school drop outs, higher female illiteracy, lower labour force participation, lower access to health care, lower nutritional status, higher morbidity and proneness to diseases such as anaemia, discrimination in wages and the labour market, inferior status resulting in atrocities on the one hand and low self-esteem on the other, are some of these indicators.

Education, therefore, has to be used as an agent of cultural and

we make an effort to enhance it to the extent needed. Then the scenario would be that as many women would be knocking at employers' doors as men are doing at present. If equality is also established in recruitment to jobs, similar equality would prevail in respect of the unemployed as well. Women would be subjected to the same privations as those of unemployed men. If unemployed men can take recourse to casual jobs, not to speak of activities which cannot be spoken of, in order to keep body and soul together, would the same have to be true of women? Probably it would. Would this scenario be acceptable

to the society in general and women in particular? This is one important aspect to consider. It highlights the fact that mere access to education is perhaps not enough, since it would only replicate a situation which all of us already deplore. What would be needed, in addition to access to education in the case of women, is a qualitative change to be brought about in the content and in the processes of education. Specific interventions in these two areas are essential if education is to be, (as I said a few minutes ago,) both a journey and a destination, a tool and a target. Any neglect of the content of education would make the benefit of education partial and lop-sided. The existing societal values, prejudices and stereo-types operating against women would still persist in one form or another. The best example in this connection is one of dowry which, in many cases seems to have been aggravated by the advent of education. An educated bridegroom seems to have become more dowry-prone in the matrimonial market although I must admit that demands for dowry have assumed new and sophisticated forms. The would be son-in-law of today is very enlightened. He does not demand money; instead he demands a residential Visa in a particular country.) I discovered these facts in the tearful eyes of several parents of educated girls when I was in the Ministry of External Affairs. These are some bitter realities which make our swan songs on education sound somewhat phoney. (At the same time, no one can deny that education has made the woman self-reliant and brave. The possibility of economic independence, by itself enhances her status, even without her actually earning by herself.... To sum up, the two sides of the picture I have described above clearly show that education needs to be buttressed by the right motivation in order to become the catalyst of change.

Looking at the other end of the spectrum, we have one of the largest illiterate female populations amongst the countries of the world. The last census decade has seen an improvement of slightly over 8% in female literacy. In the same decade the improvement of male literacy was slightly lower. But the total number of illiterate women has increased from 215.3 million in 1971 to 241.6 million in 1981.

More significant than these figures, from the point of view of women, is the widening gender gap amongst the illiterate population. In 1911 for every 1000 illiterate men there were 1055 illiterate women. In the 70 years which have elapsed since then till the last Census, this gap has been steadily increasing. In 1981, for every 1000 illiterate men, there were 1322 illiterate women. Here is a case of inequality, even in illiteracy!

Other significant pointers are the higher differential between rural and urban female literacy figures, the exceedingly low levels of female literacy amongst scheduled castes and tribes, the exceedingly wide disparities and regional variations in female literacy figures and the positive correlation between higher female literacy, better access to health care, improved acceptance of family planning and contraceptive methods, increased age of marriage and corresponding lowering of fertility.

The education scene today presents some alarming contrasts. The problem is of access, but not merely of physical access. There is a school—may be a school of sorts—in most villages of India today. But it remains substantially unused in the sense that a large number of children, specially girls, cannot take advantage of it. The girl is busy carrying the sibling while the mother is at work; and siblings are pretty quick in coming, as is well known. When the joint family was the norm, there was always some grand-mother or a

widowed elderly aunt who was in charge of many undefined chores including taking care of new-born babies and siblings. But the progressive break-up of the joint family has created a situation where no help is available to those who cannot afford to engage outside help. And even where it is engaged, it is in most cases a girl who ought to be in school herself, so that those who can afford are, in effect, getting schooling at the expense of those who cannot go to school. I do not know how far the lucky graduates in front of me are aware of this scenario; I do hope some studies on these problems have been undertaken by this University. Let us, for a moment, return to the girl taking care of her sibling sister and their mother. What did the mother do when she had the very First child earlier? Did she stop going to work? Obviously she did not. She must have made some arrangement. If nothing else worked, she must have carried the baby to where she worked and put it to sleep in an improvised cloth cradle in the shade of a mango tree. These are familiar enough scenes for most of us who hail from villages. But the question of questions is, why does the mother not do with her second baby exactly what she did with the first? Why do the presence and availability of the first child make all that terrific difference? Simply, it is because the mother just does not realise the importance of sending the girl to school. The girl is meant for home chores; so she is made to do what she is believed to be meant for. This is the logic of the situation, seen from her angle. This logic has to be broken; that is the challenge today.

Suppose, again, that for the second baby, some arrangement is made to take care of. In that event, the first-born girl would have no difficulty to be put to school. But quite often this too does not happen and she is made to work somewhere to earn

something. What she earns may not be of any consequences, at least in some cases. Even so, earning even a little bit is considered better or worthwhile, while going to school is seen as worth nothing. If this is the value system in a given section of society, that is the section which social workers and political leaders must concentrate upon with a view to changing a view to changing its attitude.

Increased access to education on the part of these target groups is an objective which fits into the redistributional strategy to which a democratic republic we owe allegiance. To reduce the concentration of power and knowledge in fewer and fewer hands, we are committed to make elementary education available to each Indian citizen. But as I said just now, specific interventions will have to be made to enable this strategy to be operationalized, not only in the educational infrastructure and processes, but in those crucial sectors which impinge on the daily lives of the children belonging to those target groups. A disaggregated and micro level approach is essential in formulating strategies to operationalise such a policy. Along with disaggregation there should also be a fair amount of decentralisation and delegation. However, I wish to emphasise that this is for operational purpose only. Our basic policy of adherence to a national system of education should continue to guide us throughout.

When dealing with the marginalised, vulnerable and assetless groups we are talking about, we should plan and build enough supports to buttress the educational framework. There is a very high opportunity cost which school education carries, in case of children belonging to these families. In order, therefore, to retain them at school, the needs of the whole family have to be taken into consideration and not just those of the potential school entrant. This again

requires elaborate micro-planning undertaken by a very large number of social workers and volunteers who have the patience to reach each and every family of the vulnerable sections in the far-flung villages of India. An intensive crash programme of this kind for the next fifteen years seems to be the only answer to the almost intractable problem of female education.

Let me now turn to the "content" issue of education. Today's educational structures and processes, as I said a little while ago, re-inforce the present age-old cultural and socio-cultural myths and traditions inherited from a patriarchal age and compounded by a history of foreign and feudal rule. Sensitisation to women's issues and needs is a task which education can fulfil only when it transforms itself from a maintainer of the status quo to a change agent or a catalyst. I am aware that the women's movement in this country has made such a demand and have been fighting and agitating for such a revolution of ideas. There has been, in the last decade, a move to introduce Women's studies within the University system. The aim is to change attitude and values, to enhance status and rights, to increase participation in political/economic/social processes by women. To use women's full potential for national development needs an increased awareness amongst men and women and an increase in women's self-esteem. Revitalization of University education, making it closer to present day issues of social relevance is also a part of the broad objective.

The existing methodologies, assumptions, approaches and concepts in social sciences and other disciplines will therefore have to be critically examined, re-examined and questioned. I am aware that a lot of useful work has already been done in several areas such as examination of the household concept, the work

concept, the productivity and economic activity concept, etc. from the point of view of women. The Research Unit of Women's Studies set up by this University since the last 12 years has done valuable work in this direction, and throughout the country there has been a quickening of interest in women's research studies. By 1981, 41 Universities and 17 other Centres and institutions had undertaken research on women. The University Grants Commission has taken the initiative by writing to all universities to integrate women's issues and concerns into the teaching and research programmes of different disciplines. It has also evolved guidelines for the development of Women's studies programmes. Such an exercise would call for restructuring of courses, curriculum development, research projects and extension type of activities.

We have, in this country, a very large resource in the thousands of colleges and institutes of higher learning apart from universities. These institutions can, in the new scheme of things, be pressed into service in implementing many of the programmes intended for the neglected target groups. Since our main focus here would be on the rural areas, such a strategy pre-supposes a strong and solid infrastructure in the Departments of Extension in these institutions...

I mentioned a while ago about elimination of sexist bias. Our media, our literature, our school and college text books and our current folk lore are deeply steeped in these biases and tend to perpetuate them. Gender based division of labour, duties, knowledge, power and skills are reflected through all these different organs. Religious mythology also plays a part in this process. But these are only manifestations of what obtains in society and not the causes thereof. They are not even independent phenomena by themselves. They will change when the genus

changes. And, it is to the genus that social engineers should address themselves. While in the Indian ethos there is the peculiar combination of idealisation of the woman and her subordination, she was not reduced to the level of a chattel and bought and sold in the open markets as happened in some other countries until not very long ago. In the countryside, while indignity heaped on the woman is a common enough spectacle, her influence in the affairs of the family is not inconsiderable in a vast number of cases. For a woman to work for livelihood is not only not unusual in a vast majority of the Indian population, but in actual fact, the woman does more work than man in the family. Our women participated openly and with vigour in national politics and social movements long before women in countries that are today called advanced. It appears, therefore, that the chances of women finding equal opportunity in life in today's context are by no means bleak and if a positive approach is adopted, modern Indian society need not pass through the unsavoury stage of sex confrontation...

Institutions of higher learning such as colleges, universities, etc. can take up such challenges through their commitment to women's studies. It is a matter for introspection that higher education for women is still confined to a microscopic minority of the population. Only 3% of women, preponderantly of the urban areas, have a graduate degree or higher qualifications. The responsibility to provide the right kind of leadership, therefore, rests on universities like yours. What is needed is a serious commitment on the part of the young and a countrywide, very intense movement to demolish reactionary tendencies. The power of the campaign should be so irresistible that all attempts to oppose it should crumble..." □

MINISTRY OF HUMAN RESOURCE DEVELOPMENT

(Department of Education)

ES. 1 Section

POLISH GOVERNMENT SCHOLARSHIPS, 1985-86

Applications on plain paper are invited from Indian nationals for the award of 15 scholarships offered by the Government of Poland in the following subject-fields :—

1. 7 Scholarships for courses leading to Doctoral Degree in : (i) Conversion of Coal ; (ii) Coal Mining ; (iii) Machine Building ; (iv) Structural Engineering ; (v) Chemistry (Polymer) ; (vi) Mathematics (Pure) ; (vii) Naval Architecture.
2. 2 Scholarships for post-graduate course in Town and Country Planning, at Szczec—in Technical University.
3. 5 Scholarships for post-graduate course in National Economic Planning ; at the Main School of Planning & Statistics, Warsaw.

VALUE : Adequate maintenance allowances ; free medical assistance ; free tuition and free lodging when necessary, will be paid by donor Government.

DURATION : For (1) : 3 years.

For (2) and (3) : about 6 months.

QUALIFICATIONS : For (1) above : From (i) to (vi) : Uniformly good academic record with a Master's Degree in Science/Engineering/Technology in the subject selected or in an allied field. For (vii) : Bachelor's degree in Naval Architecture.

For (2) Above : Bachelor's Degree in Architecture or Civil Engineering or a Master's Degree in Geography alongwith a Post-graduate Diploma in Town & Country Planning.

For (3) Above : Master's degree in Economics.

ESSENTIAL EXPERIENCE : At least two consecutive year's teaching/research/practical experience at the college or University level as on 1.10.1985 in the subject-field selected after passing the prescribed qualifications. Successful completion of M.Phil./Pre-Ph.D. course would be counted towards experience. Good knowledge of English is essential.

AGE : Must be less than 33 years as on 1.10.1985 (Relaxation in age upto two years will be given in the case of Scheduled Caste/Scheduled Tribe candidates). Upper age limit and experience can be relaxed by not more than three months at the discretion of the Selection Committee in the case of brilliant candidates.

PASSAGE COST : Travel expenses from India to Poland and back will be borne by the candidate or his/her sponsors/employers. Subject to availability of funds, the passage cost may be met by the Government of India, provided the candidate is eligible under the rules.

NOTE : (i) Only candidates with 60% marks and above at the level of minimum qualifications prescribed above are eligible. Where Grades are mentioned, the candidate must indicate the conversion formula adopted by the University/Institution.

(ii) Master's degree means M.A./M.Sc./M.Tech./M.E. but not M.Phil./Pre-Ph.D.

(iii) Candidates who have already been abroad for study/research/training either on a scholarship or on their own are eligible to apply, only if they have been in India for atleast three consecutive years after return from abroad.

(iv) Applications of candidates who are abroad will not be considered.

(v) Equivalent foreign degrees will be considered.

(vi) Candidates should have adequate knowledge of the geographical situation, culture, and heritage of India and the donor country.

(vii) Employed persons must send their applications through their employers with 'NO OBJECTION CERTIFICATE' in time, failing which applications will not be considered.

(viii) Applications in subject-fields other than those specified above will not be considered.

(ix) Candidates who do not possess the requisite qualifications need not apply.

(x) Applications should be in the prescribed format and accompanied by postal order of Rs. 5/- (Re. 1.25 only in the case of Scheduled Caste/Scheduled Tribe and other Backward class candidates) payable to the Secretary, Ministry of Human Resource Development, Deptt. of Education, New Delhi.

(xi) Applications which do not contain the postal order (or do not mention the number and date of postal order which has been sent alongwith the original application sent through proper channel, where necessary) will not be considered.

(xii) One application should be submitted for one subject only. Candidates should apply for the above scholarship on plain paper, furnishing the following details and attested/photostat copies of all degrees/diplomas/marks-sheets/date of birth etc. to the Secretary, Ministry of Human Resource Development (Deptt. of Education), Room No. 516, B-Wing, Section ES.1, Shastri Bhavan, New Delhi-110001, by 12.3.1986. The documents should be properly tagged. Applications received late will not be entertained.

1. Name of the Scholarship Scheme : POLISH GOVERNMENT SCHOLARSHIPS, 1985-86.

2.(a) Subject

(b) Sub-subject

(c) Duration

3. Name of the Candidate (in Block letters) with full mailing Address:

4. Date of Birth and the State to which the candidate belongs:

5. Whether a member of Scheduled Caste/Scheduled Tribe or a tribal or aboriginal community. If so, give full particulars:

6. Academic record starting from High School/Higher Secondary

Name of the University/Board/Institutions	Examination(s) passed	Year of passing	Division/Class with position if any*	% of marks obtained & position, if any	Subjects taken
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*in case no Division/Class is awarded & only grading is done, the conversion formula adopted may be mentioned.

7. Details of Professional/Practical Training & Research Experience, specifying the period and number of papers published, previous employment with name & date of employment, if any (details to be furnished after passing the prescribed minimum qualifications.)

8. Nature of the present employment, with date of appointment, designation and the name and address of the employers.

9. Have been abroad ? If so, give full particulars of the country and the period; also mention the year of return to India.

10. Have you applied for any other scholarship scheme. If so, give details.

11. Proposed programme of study/research/training, specifying:

(i) the work in which engaged at present

(if doing Ph.D., please indicate date of registration & likely date of completion).

(ii) nature and programme of study/research desired.

(iii) Future plans/prospects after the proposed studies/research; and

(iv) How are these related to the technical or economic development of India ?

12. Crossed postal order of Rs. 5/- (Re. 1.25 in case of Scheduled Caste/ Scheduled Tribe candidates etc.) may be attached with the form with passport-size photograph (one copy) (No. & Date of Postal Order to be given)

NOTE : Employed persons must send their applications fully sponsored by the Employers. However, advance applications will be considered provisionally pending sponsorship by employers.

Place :

Date :

Signature of Candidate

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Challenges in Building up High Technology Institutions

As a part of the Silver Jubilee celebrations of the Indian Institute of Technology, Delhi, Shri K.P.P. Nambiar, Chairman and Managing Director, Indian Telephone Industries, Bangalore delivered a popular lecture on "Perspectives in Electronics and Challenge in building up High Technology Institutions" on 11th February, 1986.

Mr. Nambiar said that Indian Electronic Industries is still in its infant stage having contributed about Rs. 2100 crores worth of production in 1984-85 compared to an estimated world electronic production of Rs. 5,00,000 crores in 1985, corresponding to less than 0.5% of the World's production. The slow growth of the electronic industry has been attributed by experts to wrong fiscal policy that has been followed during the years particularly in relation to customs tariff for raw materials, components and finished equipments, uneconomic scale of production, lower investment in Research & Development, regulatory measures exercising too much control on the industrial licensing, and delay of four to five years in implementing major projects from the date of conception of the project.

Some measures have been taken in the recent past to remedy the above situation beginning from reversal of the duty structure, atleast partially implemented in August 1983. There is considerable lacuna in development of electronic industries at present. While the limitation on production has been officially lifted making economy of scale as the criterion for manufacture, the phased manufacturing programme involving large scale import of SKD/CKD in the case of equipment

industries, is having its adverse effects on the foreign exchange outflow as well as on the indigenous development. This can only be overcome by increased investment in component manufacture and investment in R & D, said Mr. Nambiar.

The 7th Five Year Plan envisages increase in the electronic production from Rs. 2100 crores in the 1984 level to Rs. 10,800 crores per annum by 1990. This includes growth in the field of components, consumer electronics, communications, instrumentation and controls, computers and office automation, broadcasting, Aerospace and Defence. Implementation of this plan calls for massive efforts not only in investments which is not substantial being of the order of only Rs. 2000 crores for a five year period but in formulation of the policies which will enable spreading of the industry in different parts of the country from urban to rural areas and intensification of applied electronics research and development by encouraging inhouse R & D in public and private sector companies and setting up of centres of excellence in specified mission-oriented technologies.

It is in this context that the challenges in building up high technology institutions especially in the field of electronics will have to be accepted by entrepreneurs. The challenges are many because of the various problems encountered especially in creating infrastructure in a totally new environment. Problems in dealing with the licensing and regulatory machinery, mobilisation of finance, governmental and political interference at the grassroot level, divergent influence of the private and public sector and the systematic manner in which orga-

nisations have to be built against several odds and difficulties that will be encountered in the building up of such high technology industry mainly in the industrially backward areas in the country have to be systematically tackled. Mr. Nambiar narrated the example of Kerala State Electronic Development Corporation (KELTRON)—the first State Corporation of its kind in India and its growth from a single employee to a multi-product and multi-disciplined high technology Company to bring home the agony and ecstasy of building up of a large industrial organisation from the scratch.

National seminar on 'Mussel Watch'

A two-day national seminar on 'Mussel Watch' was organised by the University of Cochin during February 13-14, 1986. Sponsored jointly by the Department of Science & Technology (DST), Department of Ocean Development (DOD), Department of Environment (DOE), University Grants Commission (UGC), Indian Council of Agricultural Research (ICAR), the Marine Products Export Development Authority (MPEDA), and the Kerala State Committee on Science, Technology & Environment, the seminar was inaugurated by Mr. K. Karunakaran, Chief Minister of Kerala. Dr. K. Gopalan, Vice-Chancellor of the University presided over the inaugural function.

Over 150 marine scientists and environmental experts from all over India and abroad participated in the seminar. 26 research papers on the biological, chemical and general aspects of 'Mussel Watch' were presented and discussed. The key-note addresses were delivered by Dr. B.L. Bayne, Dr. A.V. Holden and Dr. M. N. Moore of the U.K., while the three technical sessions were chaired

by Dr (Mrs) Martha Vannucci, Dr. N. Balakrishnan Nair and Dr. E.G. Silas.

→ The seminar recommended, *inter-alia*, that:

- a national programme for monitoring coastal pollution through "Mussel Watch" be initiated;
- the Department of Environment of the Govt. of India should be identified as a national nodal organisation for guiding, planning, monitoring and managing the sectoral programmes undertaken at different organisations, institutions and agencies;
- certain organisations having facilities and expertise be identified to carry out mission-oriented programmes so that definite progress and accomplishments of the objectives could be achieved.
- suitable and appropriate techniques and standards should be developed and documented for monitoring programmes for tropical waters; and
- a national "Mussel Watch" data centre should be established so that the data acquisition and a rapid dissemination system could be developed. The Centre could also serve as a national organisation for documentation of appropriate literature relevant to "Mussel Watch" activities.

National Cell-Tissue Culture Facility

→ The National Bio-Technology Board of the Department of Science and Technology has approved a proposal for the establishment of the National facility of animal cell-tissue culture at the University of Poona. This facility when established will operate major training programmes under the auspices of the Department of Zoology-Biotechnology Programme of the university. The National

Institute of Virology, Pune, will be involved in developing the infrastructure for Animal cell-tissue culture at the National Facility which will be an autonomous organisation.

A sum of Rs. 3.77 crores has been sanctioned for the first five years for the implementation of the proposal. This includes Rs. 1.25 crores for the construction of laboratories and support facilities, Rs. 1.45 crores for equipment, and Rs. 1.02 crores for recurring expenditure.

The project is proposed to be implemented in a phased manner. In the first phase, emphasis will be laid on specialised technical manpower, some of whom may be absorbed in the facility itself. The university is also considering introduction of one year postgraduate course in animal cell-tissue culture from the next academic year. This course will be conducted under the Biotechnology Training Programme in the Department of Zoology in collaboration with the National Institute of Virology and the National Facility. The two-year M.Sc. (Biotechnology) already being conducted by the Department of Zoology will have five students trained in this specialization in order to meet the manpower requirements of the National facility. There is also a provision for award of fellowships to the selected candidates for these courses.

Research centre in physical education and sports

The Department of Human Biology, Punjabi University, Patiala has a unique Research Centre in Physical Education and Sports (RCPEs) working for the promotion of Physical Education and Sports Sciences with particular emphasis on exercise physiology, biochemistry and Kinanthropometry.

The researches at the Centre are

directed at evolving scientific norms for top level athletes; developing scientific criteria for catching promising sports probables at young age, and improvisation of simple, less expensive but accurate laboratory equipment.

A simple equipment to measure human anaerobic power (man's capacity to produce maximal energy without using atmospheric oxygen) has been improvised by Dr. D.K. Kansal, Mr. S.K. Verma and Prof. L.S. Sidhu that invited an editorial comment in the British Journal of Sports Medicine that 'this less-expensive device produced at RCPES of the Punjabi University's Department of Human Biology is equally accurate as are the very expensive equipments used for the same purpose in Europe and USA.'

The centre was started with the help of a UGC grant in 1973, and after the first phase of orientation and training programme, started publishing its research work in 1977. To date it has published more than 110 research papers in various national and international research journals.

In view of the RCPES's potentials, the Department of Human Biology has decided to start M.Sc. and M.Phil. courses in Sports Sciences and Health Education at the Punjabi University from the next academic session.

University-Industry nexus

A national seminar on interaction between research in Universities and Industries is being organised by the University of Delhi during 8-10 May, 1986. The objective of the seminar is to identify the industries where University research can play an important role and to devise ways and means of active interaction between research in Universities and Industries.

The topics proposed to be discussed at the seminar include : (i) Physics and Electronics, semiconductor, high pressure, steel and other such industries; (ii) Chemistry and Pharmaceuticals, fertilizer industries; (iii) Botany and agriculture and environment; (iv) Geology and Oil exploration; (v) Anthropology, Social Sciences and basic cultural background and environment required for the industries; and (vi) Computer studies and its industrial applications.

Teachers and research workers from various universities, scientists, technocrats and representatives from the Ministries of Human Resource Development and Science and Technology are expected to participate in the deliberations of the seminar. Further details can be had from Dr. Yogesh Kumar, Secretary, National Seminar on Interaction between research in Universities and Industries, Department of Physics and Astrophysics, University of Delhi, Delhi-110007.

Recognition for Punjab School of Economics

The Punjab School of Economics of the Guru Nanak Dev University has been recognised by the World Bank (Washington) for its quality teaching, courses and research and has been covered under the World Bank's Depositary Library Programme. Under this scheme, the School would get all the research publications of the World Bank free. These publications will be of great value to students and researchers of the northern region for their research projects.

The School offers many courses at M.Sc. and post M.Sc. levels in which dissertation is compulsory. It also lays emphasis on teaching and research in quantitative Economics.

Punjabi feature service

The Department of Journalism and Mass Communication, Punjabi University, Patiala has launched a "Punjabi Feature Service" to supply articles and features to the Punjabi Press. This is an effort to build up a feature service in Punjabi which is comparable to the best available in any other language in the country.

Members of staff and students of the University as well as those of the affiliated colleges will be involved in this service.

Vidyasagar University starts postgraduate courses

Vidyasagar University, Midnapur, has started classes in six postgraduate subjects with effect from 15.1.86. The subjects are (i) Applied Mathematics with Computer Science, (ii) Economics with Rural Development, (iii) Political Science with Rural Administration, (iv) Commerce with Management, (v) Anthropology with Tribal Culture, and (vi) Library Science.

News from UGC

INSAT-1B Programme of UGC

Between 1st and 15th March, 1986 the following schedule of telecast on higher education through INSAT-1B under the auspices of the University Grants Commission will be observed. The programme is of one hour duration every day from 12.45 p.m. to 1.45 p.m. (Repeated from 4 p.m. to 5 p.m.) and will be available on the TV network throughout the country. For the viewers in Delhi and surrounding areas these programmes can be seen on the second channel.

1.3.86

"Differential gene expression",
"Unity in Diversity: Religion"
"Eagles"

2.3.86 (Sunday)

No Telecast

3.3.86

"Patterns in Development"
"High above the Dust"
"Space-A New Place to Work"
"Radial Keratotomy"

4.3.86

"Patterns in Development"
"A Talk on Science, Scientists & Society"

"Self Organisation in Chemical System"

5.3.86

"Chicken or Egg"
"The Journey of Sound"
"Vision of Nehru"

6.3.86

"Insect Harmonies"
"Under High Skies"
"Lightening"

7.3.86

"Diabetes : Restoring the Balance"
"Circulatory System-I
Physiology of Blood"
"Causes of Seasons"

8.3.86 (Second Saturday)

No Telecast

9.3.86 (Sunday)

No Telecast

10.3.86

"Respiratory Mechanisms"
"Circulatory System-II
Heart and Circulation"
"Air to Live
Inter Nationes"

11.3.86

"Cardiovascular Control"

"Logic Circuits"

"War on Rates"

12.3.86

"Mammals in Water"

"The Story of Writing-I.
The Beginnings"

"Winds and their Causes"

13.3.86

"Osmoregulation in Arthropods"

"The Chinese Writing System-I"

"Airplanes"

14.3.86

"The Vertebrate Kidney"

"The Chinese Writing System-II"

"Ancient Greece"

15.3.86

"Digestion"

"The Indus Script"

"Language, Age 3-5"

UGC assistance for Museums

The University Grants Commission has decided to provide financial assistance to some universities and colleges for the development and strengthening of their Museums. The assistance for a period of 5 years will help meet the expenditure on staff, equipment and documentation facilities and will be outside the Plan allocation made to the institutions.

Eight universities and one college which have been sanctioned financial assistance for this purpose are: Sardar Patel, Kashmir, Aligarh, Gauhati, Indira Kala Sangeet, Kurukshetra, Marathwada and Poona Universities and Deccan College, Poona. This has been done on the recommendations of the Panel on Arts History and the Committee on the Development of Museums.

UNIVERSITY NEWS, MARCH 1, 1986

Sports News

University team for Federation Cup

The following Volleyball (M) team represented Indian Universities in the Federation Cup held at Badagara, Kerala from February 16-23, 1986. Selection trials took place at Calicut on February 5-6, 1986.

Suresh B.R. (Capt.)—Bangalore; Abbas, Mathew Chako, Asoka C, Jayan K.G.—Calicut; T.C. Jyotish, Jojo Cherian—Kerala; D. Joshi Babu—Andhra; Mahabir Singh—Kurukshetra; Rajan Nair—Bombay;

Upendra Bahadur Singh—Allahabad; and Subhash Chandra—Rajasthan.

T.P. Bhaskar Kurup and E.J. Jacob of Calicut University were the Coach and Manager of the team.

GNDU excels in Boxing

The University secured the first position in the All India Inter-Varsity Boxing Championship held at its Campus from January 28 — 31, 1986. Osman's University, Hyderabad were the runners up.

CORRESPONDENCE COURSE IN EVALUATION

METHODOLOGY & EXAMINATION

Applications are invited from college/university teachers for admission to Correspondence Courses in Evaluation Methodology and Examinations at Basic Level, Intermediate Level and Advanced Level/Special Professional Course. The duration of each of the three courses is six months. A personal 'Contact Programme' for three days is planned for each of the three courses. A set of prescribed books will be supplied to every candidate free of cost. The Basic Level Course is offered from Regional Centres like Delhi, Bombay and Madras.

Request for prospectus and application form accompanied by a crossed Indian Postal Order for Rs. 5/- drawn in favour of the Secretary, Association of Indian Universities and a self addressed stamped envelope (Re. 1/-) should reach the undersigned. Last date for receipt of applications is 15th March for non-sponsored and 26th March, 1986 for sponsored candidates.

Project Director (Examinations)

ASSOCIATION OF INDIAN UNIVERSITIES

AIU House, 16 Kotla Marg,
New Delhi-110002

RECRUITMENT TO FACULTY & POST-DOCTORAL POSITIONS

THE INSTITUTE OF PHYSICS, BHUBANESWAR plans to recruit (i) experimental physicists to carry out research in nuclear, condensed matter and atomic physics with 3 MV tandem pelletron accelerator which it is acquiring shortly; and (ii) young theoretical physicists to strengthen the present activity.

ESTABLISHED a decade back by the Orissa State Government, the Institute has recently been passed over to the Department of Atomic Energy, Government of India, as an autonomous institution like TIFR, Bombay and SINP, Calcutta. At present it has on its faculty three groups carrying out research and providing research guidance to doctoral fellows in theoretical solid state, nuclear and particle physics. In experimental physics this activity is confined to positron annihilation and compton profile studies of solids. Faculty members take active part in teaching advanced courses and setting up advanced experiments for the one-year pre-Doctoral Programme.

APPLICATIONS with complete bio-data, research and teaching experience, list of publications and three letters of recommendation sent directly by chosen referees should reach the Director before **March 31, 1986**. Positions commensurate with ability, merit and experience will be offered after consideration by a National Committee of Experts.

INSTITUTE OF PHYSICS

**SACHIVALAYA MARG,
BHUBANESWAR-751005
INDIA**

AIU Library & Documentation Services

One of the important functions of the Association of Indian Universities is to act as a clearing house of information on higher education in the country. Towards this end the AIU Library is engaged in collection, building and developing instruments for the dissemination of research information. Over the years a valuable collection of books and documents on different aspects of higher education has been acquired.

The Library has also developed Bibliography of Doctoral Dissertations as an effective tool in the dissemination of research information. Retrospective bibliographies covering the period 1857-1970 and 1970-75 were the first to appear. Effective 1975, however, the bibliography is issued annually in two volumes. One volume deals with Natural and Applied Sciences while the other records doctoral degrees awarded in Social Sciences and the Humanities. In addition to the normal bibliographical details like the name of the Research Scholar, the title of the thesis, years of registration for and award of the degree, and the name of the University accepting the thesis for award of a doctoral degree, the bibliography also gives name and complete address of the supervising teacher and an availability note that seeks to inform whether a copy of the dissertation is available for consultation and use in the University Library/Department or Registrar's Office.

The columns 'Theses of the Month' and 'Research in Progress' are intended to cut out the time lag between the receipt of information and its inclusion in bibliography. Such Universities as are not sending us regular information in respect of Doctoral Theses accepted and research scholars enrolled are welcome to make use of these columns.

The Library is open from 9.30 a.m. to 5.30 p.m. Monday through Friday.

A list of Research Scholars Registered for Doctoral Degrees of Indian Universities

SOCIAL SCIENCES

Library Science

1. Dharma, Neelimesh. *National information system : A comparative study with special reference to U.K., USA, USSR and India.* HS Gour, Sagar. Dr. H.N. Sengar.
2. Dung, Raghubir Singh. *Landmarks in library classification : A citation study of famous classificationists, classifiers and their writings, from 1870 to 1978.* Pb U, Chandigarh. Dr. U.K. Tikku.
3. Gian Chand. *Railway library system for India : A model for Northern Railways.* Pb U, Chandigarh. Dr. U.K. Tikku.
4. Shrivastava, V.P. *A study of library and information science education in Indian universities with a view to formulate norms in M.P.* HS Gour, Sagar. Dr. R.G. Prashar.

Psychology

1. Bhatia, Sangeeta. *A study of psychomotor-performance of exceptional children.* Pb U, Chandigarh. Dr. Jitendra Mohan.
2. Nisha. *A study of adolescent alienation in relation to personality, values, adjustment, self-esteem, locus of control and academic achievement.* Pb U, Chandigarh. Dr. Jitendra Mohan.
3. Sandhu, Sadhana. *Construction of Triguna personality scale and its relationship to Eysenck's personality model.* Pb U, Chandigarh. Prof. (Mrs.) Vidhu Mohan.
4. Sukhdev Singh. *An empirical investigation of the diagnostic utility of word association emotional indicators.* Pb U, Chandigarh. Dr. V.V. Upamanyu.

Sociology

1. Chalise, Suresh Chandra. *Socio and economic aspects of Nepal.* BHU, Varanasi. Prof. G.S. Nepali.

2. Mohanty, Premananda. *Child labour in unorganized sector in Chandigarh : A sociological study of the physical and economic abuse of the children.* Pb U, Chandigarh. Dr. A. Mahajan.
3. Munisa Rafiq. *Muslim women : A sociological study.* BHU, Varanasi. Dr. M.P. Singh and Prof. M.C. Shrivastava.
4. Singh, Raghu Raj. *Rural social changes.* BHU, Varanasi. Prof. G.S. Nepali.

Political Science

1. Santokh Singh. *Green revolution and Akali politics in Punjab, 1967-1985.* Pb U, Chandigarh. Dr. B.S. Brar.
2. Sarvestani, Esmaeil Shafiee. *Iran and the regional cooperation for development.* Pb U, Chandigarh. Dr. K.K. Pathak.
3. Sharda, Nil Kanth. *Child legislation in India, its political, social and economic dimensions.* Pb U, Chandigarh. Dr. (Miss) Pam Rajput.
4. Singh, Renuka. *Left movement in independent India.* BHU, Varanasi. Prof. H.N. Tripathi.
5. Thornbare, V.L. *A study of relationship between the non-officials and officials in the panchayati raj institutions in Maharashtra with special reference to Kolhapur District.* Shivaji U, Kolhapur. Dr. B.A. Katikar.
6. Umadevi, S. *Electoral behaviour in Kerala : A study of voting behaviour in the Lok Sabha Constituencies of Ernakulam, Kottayam and Chirayinkil.* U Ker, Trivandrum. Dr. D. Jayadevas.
7. Yelegaonkar, S.D. *A study of 19th century political development in Maharashtra with reference to the city of Solapur.* Shivaji U, Kolhapur. Dr. N.T. Pande.

Economics

1. Karbasi Mohammad Reza. *The nature and effect of inflation in under-developed countries with special reference to Iran, 1977-78 to 1983-84.* Shivaji U, Kolhapur. Dr. (Mrs) S.B. Pandit.

2. Kaushik, K. Anand. *Sahagpur kshetra mein karyarat koyala khan shramikon ka arthik adhyayan*. HS Gour, Sagar. Dr. Subodh Kumar Pandey.

3. Kewal Ram. *Government regulation and industrialisation in India since independence*. HPU, Shimla. Dr. L.R. Sharma.

4. Sharad Kumar. *Audyogik arthashastra*. BHU, Varanasi. Dr. (Mrs) M. Srivastava.

5. Shukla, Prabha. *Krishi upaj mandiyon ke sandarbh mein Narsinghpur Jile mein krishi upaj ka vipanan*. HS Gour, Sagar. Dr. P.K. Patankar.

Law

1. Naresh Kumar. *Air pollution in India : Law and their enforcement in perspective*. MDU, Rohtak. Dr. Ranbir Singh.

2. Paramjit Kaur. *Administration of military law, its sheltered development : A study in the context of constitutional imperatives*. Pb U, Chandigarh. Prof. B.K. Gupta.

3. Shangla, Neelima. *Prison administration and constitutional human rights concepts*. Pb U, Chandigarh. Prof. B.K. Gupta.

Education

1. Sharma, Damodar Lal. *An experimental study of the effectiveness of specific Hindi teaching skills and validation of instructional materials*. MDU, Rohtak. Dr. J.C. Sharma.

Commerce

1. Dharm Sukh. *Working of communication process in selected industrial organisations with special reference to Haryana*. MDU, Rohtak. Dr. L.N. Dahiya.

2. Gupta, Vidya Sagar. *Financing of small scale industries by the development banks*. BHU, Varanasi. Dr. C.P. Mall.

3. Jha, Shankar Nath. *Profit planning and control in private corporate sector in India : A case study*. BHU, Varanasi. Dr. K.M. Pandey.

4. Joshi, G.B. *An enquiry into the working of lead bank scheme with special reference to Bank of Maharashtra Lead Bank for Satara District for the period, from 1977 to 1987*. Shivaji U, Kolhapur. Dr. V.V. Khanzode.

5. Malik, Ram Mehar Singh. *A critical study of financing of five year plans in Haryana*. MDU, Rohtak. Dr. G.S. Chahal.

6. Prasad, Shyam Shankar. *Role of trade union movement in U.P. in building industrial relation system from 1947 to 1967*. BHU, Varanasi. Dr. Dipak Malik.

7. Rai, Chandra Bhanu. *Problems of industrial development of backward regions of U.P.* BHU, Varanasi. Dr. C.P. Mall.

8. Rajesh Kaur. *Social change in urban periphery*. Pb U, Chandigarh. Prof. K.L. Sharma.

9. Santosh Kumar. *Inventory management in public sector undertakings : A study of U.P. State Manufacturing Enterprises*. BHU, Varanasi. Dr. M.N.A. Ansari.

10. Sharma, Prem Shanker. *Bank financing of carpet industry in Mirzapur*. BHU, Varanasi. Dr. K.N. Sharma.

11. Singh, Akshai Kumar. *Working of National Trade Union affiliates in Eastern U.P. with special reference to ideological and organizational frame-work, 1950-75*. BHU, Varanasi. Dr. Dipak Malik.

12. Singh, Ashok Kumar. *Role of leadership and motivational dynamics in reduction of tension and conflicts in Swadeshi Cotton Mills, Kanpur : A case study*. BHU, Varanasi. Prof. D.P.N. Singh.

13. Singh, Daya Shankar. *Executive development and work performance in Central Coal Fields in Singrauli : A case study*. BHU, Varanasi. Prof. D.P.N. Singh.

14. Singh, Om Prakash. *Bank financing of agriculture in Mirzapur District of U.P.* BHU, Varanasi. Dr. K.N. Sharma.

15. Singh, Om Prakash. *Study of productivity as function of authoritarians job involvement and job alienations : A case study*. BHU, Varanasi. Dr. S.K. Singh.

16. Urmil Rani. *Impact of labour welfare activities on productivity in Jindal Group of Industries, Hissar*. MDU, Rohtak. Dr. B.R. Agrawal.

17. Yadava, Ramsurat Singh. *Role of State Bank of India and its subsidiaries in rural development*. BHU, Varanasi. Dr. K.N. Sharma.

Home Science

1. Adhau, Vimal Ganraj. *Home management : Clothing and textiles*. BHU, Varanasi. Dr. (Mrs.) N. Sant.

2. Kulshreshtha, Kanchan. *Home management and child development*. BHU, Varanasi. Dr. (Mrs) N. Sant.

Management

1. Nagar, Krishan Kant. *A study of organisational politics and its relationship with job satisfaction, job involvement and anxiety among R & D personnel*. MDU, Rohtak. Dr. R.D. Pathak.

HUMANITIES

Philosophy

1. Dubey, Indra Raj. *Modern theory of meaning : A critical study*. BHU, Varanasi. Prof. R.S. Sharma and Dr. S. Balakrishnan.

2. Rajjan Kumar. *Jain darshan mein samadhi ke avadharna*. BHU, Varanasi. Dr. Sagar Mal Jain and Dr. C.P.M. Namboodry.

3. Singh, Dina Nath. *Philosophy of Dewey in the field of education*. BHU, Varanasi. Prof. S.S. Singh and Prof. L.N. Sharma.

4. Vaisakhiya, Dinesh Kumar. *The concept of kundalini in tantra and yoga*. HS Gour, Sagar. Dr. K.S. Joshi.

5. Bhave, Nachiketa Narayan. *A study of the principles and practices of yoga in relation to the psychosomatic problems of the modern way of life*. HS Gour, Sagar. Dr. K.S. Joshi.

Language & Literature

English

1. Desraj, Shubhasil. *The fiction of James Baldwin : A transition between the fiction of Richard Wright and Ishmeal Reed*. Pb U, Chandigarh. Prof. (Mrs.) Nirmal Mukerji.

2. Harpal Kaur. *The adolescent protagonist in the selected works of Katherine Anne Porter, Carson McCullers and Jerome David Salinger*. Pb U, Chandigarh. Dr. Meera Malik.

3. Kaushal, Sandhya. *Patterns of relations in the plays of Eugene O'Neil*. Pb U, Chandigarh. Dr. Meera Malik.

4. Lal, Niharika. *Point of view in the novels of D.H. Lawrence*. BHU, Varanasi. Dr. R.S. Sharma.

5. Rai, Lal Kunwar. *George Orwell : A study of his apocalyptic vision*. BHU, Varanasi. Dr. N.K. Lal.

6. Rai, Vijai Kumar. *R.K. Narain : A study of his moral vision*. BHU, Varanasi. Dr. M.K. Choudhary.

7. Singh, Vijay Pratap. *John Whiting : A study of theme of violence and self-destruction in his plays*. BHU, Varanasi. Dr. J.B. Mishra.

8. Vasishta, Sunil. *The human condition in the novels of William Golding*. Pb U, Chandigarh. Prof. (Mrs.) Nirmal Mukerji.

9. Yashwant Singh. *Phatic communion in English and Hindi : A socio-linguistic study*. BHU, Varanasi. Dr. R.S. Sharma.

Sanskrit

1. Sharma, Kiran. *Sankhya evam yog ke Acharya Vachaspati Mishra ke yogdan ka alochanatmak adhyayan*. Pb U, Chandigarh. Dr. R.K. Sharma.

2. Sharma, Lekh Ram. *Methodology of Samkara Bhasya : A study*. Pb U, Chandigarh. Prof. R.M. Sharma.

Punjabi

1. Tarlochan Singh. *Gurdial Singh de novel : Shaitvigyanik adhyayan*. Pb U, Chandigarh. Dr. Om Prakash Vasishta.

Hindi

1. Agrawal, Radhysshyam. *Swatantrayottar pramukh pauranik Hindi prabandh kavya mein adhunik sandarbhi*. HS Gour, Sagar. Dr. L.N. Dubey.

2. Anjan Kumar. *Hindi ke bhavnaak sangraha ka vishlesh-natmak adhyayan*. Pb U, Chandigarh. Prof. D.P. Maini.

3. Dixit, Bahram Prasad. *Nagari ke upanyas mein mishrit nar patan ka anushelan*. HS Gour, Sagar. Dr. Hosika Prasad.

4. Dubey, Manojama. *Yogesh rajnitik sandarbhi ke paripreksha mein Balakumari Gupta, Harishankar Parasai aur Shreelata Shukla ke mangya rochanon ka adhyayan*. HS Gour, Sagar. Dr. Suresh Acharya.

5. Gangrade, Krishna. *Hindi ke upanyas lekhitkon ke upanyas mein chitrit pari jeevan. Ek anushelan, sa 1960 se 1985 tak ke pramukh kriyaon per adharit*. Devi Ahilya, Indore. Dr. S.S. Vyas.

6. Gupta, Sate. *Shyam Sharma Gupta ke karya ka samajik evam sanskritik darsit se anushelan*. HS Gour, Sagar. Dr. Bhagirath Mishra.

7. Hawaldar, Singh. R.K. *Narayan aur Tansikarnath Renu ke upanyas ka tatvamatik adhyayan*. BHU, Varanasi. Dr. A.K. Tripathi and Dr. C.R. Yadav.

8. Jasvinder Kaur. *Uttarpradesh ke kavya ke karya mein ras ka sangraha*. Pb U, Chandigarh. Dr. Jasvir Narain Sharma.

9. Khar, Mahendra Kumar. *Bundelkhand ke kavya karya ka anushelan*. HS Gour, Sagar. Dr. B.P. Tewari.

10. Nandan, Lalita. *Madhyam yug ke samkalpan Hindi kavyaon ke karya ke anushelan*. HS Gour, Sagar. Dr. Govind Dwivedi.

11. Pathak, Hrishikesh Anand Chandra aur Jagnath Kumar. *Ke upanyas mein nar pati chitra*. BHU, Varanasi. Dr. Sukhdev Singh.

12. Purohit, Manvi. *Uttar Pradesh ke samaj mein samajik chitra ka anushelan*. HS Gour, Sagar. Dr. Suresh Acharya.

13. Sharma, Ravi Kumar. *Hindi kavyaon ka adhyayan : Mangya rochanon ke sangraha ke anushelan*. Pb U, Chandigarh. Prof. D.P. Maini.

14. Sharma, Krishna Kumar. *Rashtriya evam pragatisheel chitra ke sandarbhi mein Panchajanya Singh Dandan ka midhyakam*. BHU, Varanasi. Dr. Shampati Seth Pandey.

15. Singh, Pradip. *Kabi aur nar nar sangraha ka sangraha*. HS Gour, Sagar. Dr. Hosika Prasad.

16. Singh, Sange. *Gopabandh Mishra : Badi aur unka karya*. BHU, Varanasi. Prof. R.N. Agrawal.

17. Singh, Gyanendra. *Jainendra ke upanyas mein nar pati ka anushelan*. HS Gour, Sagar. Dr. P.D. Mishra.

18. Singroha, Subhash Chander. *Sanskritik puranjagan ke sandarbhi mein Maithilisharan Gupta ke karya ka adhyayan*. Pb U, Chandigarh. Prof. M.P. Bhardwaj.

19. Soni, Anita. *Soor ke bhakti ke vividh roop*. HS Gour, Sagar. Dr. Bhagirath Mishra.

20. Soni, Saroj. *Ramayan va Ramcharit Manas mein Ram raja ke avadharna aur unki adhunik sandarbhi*. HS Gour, Sagar. Dr. Bhagirath Mishra.

21. Thomas, Mathew. *Hindi aur Malayalam ke adhunik sandarbhi ke karya ka tatvamatik adhyayan*. HS Gour, Sagar. Dr. Prem Shankar.

22. Tripathi, Om Prakash. *Hindi ke pragatisheel lekhan ke paripreksha ke sandarbhi mein Ganga Prasad Mishra ke karya sahitya ka anushelan*. Pb U, Chandigarh. Prof. D.P. Maini.

Marathi

1. Salunkhe, S.A. *Reverend Narayan Vaman Tilak : Ek virechak abhyas*. Shivaji U, Kolhapur. Dr. P.B. Tapare.

2. Vhatkar, Arun Yedaba. *Dalit Adna Chetne : Ek abhyas*. Shivaji U, Kolhapur. Dr. P.B. Tapare.

Arabic

1. Hamsa, A. Mahmud Tayman : *A critical study of his style and works*. U Ker, Trivandrum. Dr. A. Ubaid.

Geography

1. Prem Sagar. *Spatial patterns of literary differentials in India, 1981*. Pb U, Chandigarh. Dr. R.C. Chandan.

2. Srivata, *Spatial patterns of population change in India, 1971-81*. Pb U, Chandigarh. Dr. R.C. Chandana.

History

1. Asha Devi. *A cultural study of Kalhan's Rantarangini*. BHU, Varanasi. Dr. A. Chatopadhyay.

2. Nalawade, Vinay Nanasahel. *Life and career of Keshavrao Jedha*. Shivaji U, Kolhapur. Dr. A.R. Bhosale.

3. Singh, Atul Kumar. *Financial control in the centre state relations in India, 1947-1977*. BHU, Varanasi. Dr. J.P. Mishra.

4. Singh, Sanjay Kumar. *Jejak Bhukti ke Chandel shaskan ke samay uchcha varna ke shikhi*. BHU, Varanasi. Dr. L. Rai.

5. Singh, Sushil Kumar. *Bharatiya rajni ke paripreksha mein Tilak*. BHU, Varanasi. Dr. K.S. Setlana.

6. Srivastava, Arvind Kumar. *Ras Bihari Bose : Ek Bharatiya krantikari ke jeevan aur kritiya*. BHU, Varanasi. Dr. S.C. Mahopadhyaya.

7. Thankam, K. *Quit India Movement in Madras Presidency*. U Ker, Trivandrum. Dr. V. Sankaran Nair.

A list of Doctoral Theses Accepted by Indian Universities

SOCIAL SCIENCES

Library Science

1. Tejwanti, A. *University libraries in Madhya Pradesh*. U Raj, Jaipur.

Psychology

1. Jam, Nutan Prabha. *Culture stratum and personality factors as correlates of parenting (fathering) in high, backward and scheduled caste people of Mainpuri District, U.P. Meerut U.*

2. Khatri, G.S. *A comparative study of the effect of prolonged deprivation on achievement motivation and cognitive abilities, among tribal and non-tribal male high school students in Pithoragarh District, U. Kum. Nainital.*

3. Natarajan, V. *The development of anxiety in personality : A developmental theory of anxiety*. D. Litt. Madras.

4. Nuzumuddin, Sabira. *Effect of child-rearing practices on the relationship of children's intelligence, creativity and personality*. U Madras.

5. Rustogi, R.K. *An investigation into the patterns of educational interests of high school adolescent*. Kum U, Nainital.

Sociology

1. Bhardwaj, Krishna. *Modernisation, religion and human behaviour : A sociological analysis of religion-social gaps in India*. U Raj, Jaipur.

2. Dixit, H.N. *Kurman ke dwijati brahmanon mein bahuvivah ke sandarbhi mein gotra, pravara evam pind ka samajshastriya adhyayan*. Kum U, Nainital.

3. Hatwalne, Tara Avirash. *Padarpesha sangateel nokary karanamaj striyancho samasya*. Nagpur U.

4. Kharya, Sharan Bihari. *Vidvanti netritva ka samajshastriya adhyayan*. Bundelkhand U.

5. Nadella, Chandra Mohan. *Aspects of dualism in India's urban labour market*. JNU, Delhi.

6. Prema, K. *The psycho-social changes among scheduled castes in the process of modernisation : A case study*. U Madras.

7. Sarang, Shantee Subhash Chandra. *Ratnagiri : A study in urban sociology*. Shivaji U, Kolhapur.

8. Srivastava, A.K. *Labour conditions in the glass industry of Western U.P. with special reference to Firozabad*. Kum U, Nainital.

9. Sudha. *Problems and working conditions of child labour in the town of Haldwani : A sociological study*. Kum U, Nainital.

10. Verma, Om Prakash. *Social contexts of Municipal politics : A study of Saharanpur City*. Meerut U.

Social Anthropology

1. Choudhary, Ram Krishan. *Caste and power structure : A case study of a Haryana Village*. HS Gour, Sagar.

2. Chutia, Minati. *Continuity and change among the Changangs of Assam : A study in ethnicity and social stratification*. Dibrugarh U.

Social Work

1. Anam Rohini. *A comparative study of fertility, mortality and family planning among the scheduled tribe and the scheduled caste populations of Visakhapatnam District of Andhra Pradesh*. Andhra U, Waltair.

Political Science

1. Adil-Ul-Yasin. *India's experience in conference diplomacy, 1955-1961*. Dibrugarh U.

2. Bhattacharya, Runu. *Administration of forestry in Assam from 1874-1974*. Gauhati U.

3. Bose, K. *Forward Bloc in Tamil Nadu : A political study*. U Madras.

4. Gaur, Radhey Shyam. *Bharatiya Rashtriya Congress Sangathan ka Bharatiya rajniti mein yogdan*. Meerut U.

5. Gupta, Ravinder Kumar. *Judicial review of constitutional amendments*. Meerut U.

6. Harbola, B.M. *Rural elite in Kumaun*. Kum U, Nainital.

7. Jain, Tarun Kumar. *Bharat mein samvidhan sanshodhanon ka ek alochanatmak adhyayan - Solhanen sanshodhan se age*. HS Gour, Sagar.

8. Pathak, Jayshri. *Administration of tribal development blocks of Seoni District*. RDV, Jabalpur.

9. Premananda Rao, B. *Political process in panchayati raj : A case study of Visakhapatnam District in Andhra Pradesh*. Andhra U, Waltair.

10. Rajkumar, Wesley Samuel. *Health administration in Tamil Nadu with reference to primary health care*. U Madras.

11. Sahani, Suprabha V. *Institutionalization of forest politics : A study of Kumaun Region*. Kum U, Nainital.

12. Shamsur Rehman. *The role of administrative elite in Bangladesh : A study of their attitude towards development*. U Raj, Jaipur.

13. Subhash Chandra. *Administration of Zila sainik boards : A case study of the contributions of Zila Sainik Board, Nainital towards the re-settlement of ex-servicemen*. Kum U, Nainital.

14. Sushma Rani. *Bharat-Soviet Sangh ke ubhan paksheya sambandhon ka alochanatmak adhyayan*. Meerut U.

15. Upreti, Bhuwan Chand. *Indian aid to Nepal : A study of the nature and working of Indian economic and technological assistance to Nepal, 1951-71*. U Raj, Jaipur.

Economics

1. Anandhi, S. *The impact of industrialisation on a suburban fringe village in Tamil Nadu*. U Madras.

2. Duraisamy, P. *Economics of education : The effect of education on fertility, schooling, employment of women, agricultural production and innovation*. U Madras.

3. Jeena, P.S. *Kumaun ke arthik vikas mein kukkut vdyog ka sahayak udyog ke roop mein yogdan*. Kum U, Nainital.

4. Khurana, Indu. *Structure of manufacturing industries in India : A District level analysis of labour force and establishments, 1901-1971*. JNU, Delhi.

5. Mariaraj, A. *Minimum wage for farm labour : An economic analysis in Tiruchirapalli District of Tamilnadu*. U Madras.

6. Rajakumar, R. *Economics of tourism in India : A case study of Madhya Pradesh*. RDV, Jabalpur.

7. Roy, Ranjit. *Economic change in Siliguri and problems of its urban development*. NBU, Rajarammohanpur.

8. Sadanandam, A. *The neo classical analysis of allocative efficiency and returns to scale in Indian agriculture : A micro level study in Andhra Pradesh*. Kak U, Warangal.

9. Sahoo, Kshetra Mohan. *Industrial democracy in experiment in Rourkela Steel Plant*. Utkal U, Bhubaneswar.

10. Samad, A. *Problems of agricultural development in the hilly areas of West Bengal with special reference to period after independence*. NBU, Rajarammohanpur.

11. Sangwan, Purn Singh. *Perspective of pulses in Indian economy, 1980-81 to 2000-2001 AD : Constraint analysis of production factors on macro level*. Meerut U.

12. Seshachalam R. *Economic ideas and Tamil literature, C.B.C. 300-C.A.D. 550*. U Madras.

13. Shailesh, Bihari Lal. *Pricing in public sector undertakings with special reference to some major public sector undertakings in India*. Mag U, Bodh Gaya.

14. Sharma, Braj Mohan. *Changes in the cost structure in sugar mills in Western U.P.*. Meerut U.

15. Singh, Birham Pal. *Mobilization of rural savings for economic development of Uttar Pradesh with special reference to development of rural economy*. Meerut U.

16. Tungare, Rajan Moreshwar. *Performance analysis of small scale industrial units in the District of Sindhudurg, evolving a suitable developmental strategy*. Shivaji U, Kolhapur.

17. Usha, P. *Leather industry of Tamil Nadu : Study of structural change during 1960-80*. U Madras.

18. Vasudeva Rao, D. *Rural development with special accent on irrigation : A case study of a Command Area in Karnataka*. U Kar, Dharwad.

19. Verma, Kirti. *Madhya Pradesh ke arthik vikas mein sanshodhan saksh ka yogdan*. RDV, Jabalpur.

20. Yadav, Rama Nand. *A study on economic benefits of new rice technology in Dabhanga District, Bihar*. HAU, Hissar.

Law

1. Bala, G. *The legal regime of navigation in the Law of the Sea*. U Madras.

2. Kesavan Kutty, V. *Cinematograph licensing*. U Cochin.

3. Suthar, S.L. *Non-centralisation and Indian Federalism : A study in theory and practice of states, rights since independence*. U Raj, Jaipur.

Public Administration

1. Kulkarni, Hemalata. *Problem of personnel management in the department of telecommunication in the state of Andhra Pradesh*. OU, Hyderabad.

2. Pothim, Krishna Prasad. *Ideology and bureaucracy in Telugu fiction*. Andhra U, Waltair.

Military Science

1. Bajra, Dalip Singh. *Development in armament technology in India since 1947*. Meerut U.

Education

1. Aher, Hira. *Critical analysis of university finances in Maharashtra*. Nagpur U.

2. Barooah, Trilokya Nath. *Development of polytechnic education in Assam and its impact on socio-economic growth*. Gauhati U.

3. Brar, Gurcharan Singh. *Comparative effects of circuit training and interval training on selected physiological measurements and running performance of females*. Pb U, Chandigarh.

4. Gowswami, Prem Puri. *A comparative study of spontaneous class room interaction and its effects on teachers*. U Raj, Jaipur.

5. Gulati, Rajinder Mohan. *An evaluative study of the educational thoughts and philosophy of Mathew Arnold*. Meerut U.

6. Gupta, Pramod Kumar. *Development and evaluation of creativity training programme for sixth grade children*. Meerut U.

7. Kachhia, Manharlal Jethalal. *An investigation into the effect of reading improvement programme in Gujarati for pupils of Class V of Sabarkantha District in the context of different variables*. SPU, Vallabh Vidyanagar.

8. Kagathala, Amarsi Becharbhai. *An investigation into the effectiveness of linear programmed material and branching programmed material in the subject of Commerce std. XI in relation to certain variables.* SPU, Vallabh Vidyanagar.

9. Manraj, J.B.S. *A study of indisciplined behaviour in Kumaun and Garhwal University students as related to creativity, intelligence and personality.* Kum U, Nainital.

10. Patil, Tukaram Baburao. *An enquiry into the present position and problems of teaching geography in the rural secondary schools of Solapur District.* Shivaji U, Kolhapur.

11. Saraswathi, K. *A critical and comparative study of evolving patterns of non-formal education at the university level in India, The UK, The USA and The USSR.* OU, Hyderabad.

12. Yadav, Mahabir. *Class room learning behaviour of pupils of different socio-economic strata and their achievement in science.* Meerut U.

Commerce

1. Agarwal, Nisha. *Management of working capital : a study of selected paper manufacturing units in India.* Meerut U.

2. Agarwal, Om Prakash. *Economic development of Hill Stations: A case study of Panchmarhi in Madhya Pradesh.* HS Gour, Sagar.

3. Farhat Hussain. *A study of new roles of the public sector commercial banking in India.* Kum U, Nainital.

4. Garg, Rakesh Sen. *Planning and management of quick assets with special reference to automobile tyre and tube manufacturing industry in India.* Meerut U.

5. Gupta, Rameshwar Prasad. *World trade in Indian textiles, cotton, jute and man-made fibres.* HS Gour, Sagar.

6. Kavidayal, P.C. *Uttar Pradesh mein andhyogik sambandhan ke naye pravitri - Cheem udyog ke vishesh sandarbh mein.* Kum U, Nainital.

7. Kewal Kumar. *Institutional financing of agriculture in District Nainital with special reference to commercial Banks : A case study.* Kum U, Nainital.

8. Rawat, G.S. *Kumaun ke arthvyavastha mein vanon ka yogdan.* Kum U, Nainital.

9. Saxena, Tej Bhan. *Bharat mein khadi udyog ka ek vishleshanajmak adhyayan.* Meerut U.

10. Sharma, Surinder Prasad. *Impact of tax incentives on investment decisions : A case study of selected companies in India.* Meerut U.

11. Sharma, Vinod Kumar. *Madhya Pradesh mein kharaj sansadhanon ka vikas.* HS Gour, Sagar.

12. Singh, V.S. *Role of lead banks in the development of rural areas of Kumaun.* Kum U, Nainital.

13. Sirari, A.S. *Kumaun mein jansankhya rogar evam samajik star kee san 1951 se pravritiyan.* Kum U, Nainital.

Folklore

1. Ngangem, Navachandra Singh. *The theme of khambu and thoibi and its significance in Manipuri culture.* Gauhati U.

Home Science

1. Rajkumar, Sarojini. *Retrospects and prospects of Indian textile export.* U Madras.

2. Sugirthavathi, S.P. *Critical analysis of family budgets in selected rural and urban areas of Tamil Nadu.* U Madras.

Management

1. Santhanalakshmi, R. *A study of certain factors determining effectiveness of executives in textile mills.* U Madras.

2. Scaria, Celina K. *Wives' contribution to executive growth.* U Cochin.

3. Vyas, Indravadan Prabhaskar. *A study of organisational climate and employee efficiency potential in a selected industrial units in Baroda.* MSU Baroda.

Karnataka Regional Engineering College, Surathkal (D.K. DIST.) P.O. SHRINIVASNAGAR-574157

STAFF RECRUITMENT

Applications in the prescribed form are invited for the post of Lecturer in the Department of Chemical Engineering so as to reach the Principal not later than 12.3.1986. The total salary inclusive of allowances in the minimum of the grade Rs. 1,611-50 in the time scale of pay of Rs. 700-40-1100-50-1600.

Higher start in pay will be considered in deserving cases. Qualification for the post of Lecturer will be as prescribed by U.G.C., A.I.C.T.E. If candidates with Post-graduate qualifications are not available or not found suitable for the post of Lecturer, first class Engineering Graduates will be considered for appointment as Lecturer.

The specialisation required for the post is Thermodynamics/Bio-Chemical Engineering/Microprocessor Application/Environmental Engineering.

Further details concerning qualifications etc. will be supplied along with the application form.

Application form and details of prescribed qualifications and other particulars can be obtained by sending a crossed Indian Postal Order for Rs. 2/- payable to the Principal of the College at Srinivasnagar Post Office along with a self-addressed envelope of size 25 x 10 cm, affixed with postage of Re. 1.30.

T. Ramchandran
PRINCIPAL

AGRA UNIVERSITY AGRA

Advertisement

Applications on the prescribed form obtainable from the Assistant Registrar (P. & P.) Agra University, Agra on payment of Rs. 10 at the counter and Rs. 15 by Money Order are invited for the following posts. The qualifications are as per the Statutes of Agra University, a copy of which shall be supplied with the application form. The application complete in all respects must reach the undersigned latest by **March 14, 1986** after which no application shall be entertained. Following are the grades for the different posts. D.A. and other facilities are as per University rules.

- | | |
|-----------|---------------|
| Professor | Rs. 1500-2500 |
| Reader | Rs. 1200-1900 |
| Lecturer | Rs. 700-1600 |
- Professor—Hindi—one permanent. Specialisation—Textual criticism or Folklore or Hindi Literature.
 - Professor—Linguistics—one permanent.
 - Reader—Linguistics—one permanent.
 - Reader—Mathematics—one permanent.
 - Reader—Zoology—one permanent. Specialisation—Environmental Biology/Wildlife Biology/Herpetology.
 - Reader—Textile & Clothing—one
 - Reader—Child Development—Leave vacancy up to 9.2.1988 (likely to become permanent).
 - Reader—Library Science—one permanent.
 - Lecturer—Linguistics—one
 - Lecturer—History—one permanent—Desirable experience of teaching M.Phil. classes.
 - Lecturer—Mathematics—one
 - Lecturer—Physics—one
 - Lecturer—Chemistry—one
 - Lecturer—Zoology—one
 - Lecturer—Home Science—Two Specialisation (a) General Home Science (b) Agricultural Science (Horticulture).

Posts at No. 6, 9, 11, 12, 13, 14, and 15 are temporary but likely to be made permanent.

S.B.B.B. Singh
REGISTRAR

UNIVERSITY OF MADRAS

Applications (Eight Copies) are invited for the post of Registrar, University of Madras, so as to be received by the Vice-Chancellor on or before **18-3-1986**. The post will carry a scale of pay of Rs. 1500-60-1800-100-2000-125/2-2500 plus allowances admissible under the rules.

Applications should be sent to Dr. B.B. Sundaresan, Vice-Chancellor, University of Madras, Chepauk, Madras-600 005. The applicant should be a holder of a Post-graduate Degree in any discipline with teaching/research/administrative experience of 15 years, of which at least 10 years shall be teaching/administrative/research experience at the level of Professor/Principal/

Registrar/Controller of Examinations in Colleges/Universities/research institutes. The candidate should not exceed the age of 50 years, which can be relaxed in exceptional cases.

Applications from candidates who are in service will be considered only if forwarded through proper channel. In such cases advance copies (7 Nos.) of applications should be sent direct to the Vice-Chancellor by name to avoid delay.

Applicants, if required, should be prepared to come for an interview at Madras at their own cost.

The Proforma application to be filled in by the candidate should contain the following details:

- Name:
- Age, Place and date of birth:
- Community: (SC ST BC OC)
- Present occupation: (with address)
- Address for communication:
- Qualification:
 - Academic (give details from first degree together with marks grade and class obtained)
 - Others:
- Experience:
 - Teaching/Research/Administrative: No. of years.
 - As Professor/Principal/Registrar/Controller of Examinations: (give details); Total experience:
- Membership of professional bodies, etc.
- Any other information:
- Give two references:
 - (1)
 - (2)

Place: _____
Date: _____ Signature of Applicant

UNIVERSITY OF JAMMU NOTICE

Applications on the prescribed form are invited for one post of Assistant Director (Continuing Education) and one temporary post of Coordinator (Minorities Coaching Cell) in the Centre of Continuing Education & Extension Work in the UGC Scale of Rs. 1100-1600 so as to reach the undersigned on or before **March 10, 1986**.

Prescribed application forms and other details can be had from Sh. Vachaspati Sharma, Assistant Registrar (Forms & Stationery) by sending a self addressed envelope (75 cms x 10 cms) bearing postage stamps worth Rs. 4/- alongwith crossed postal order worth Rs. 10/- drawn in favour of the Registrar, University of Jammu, Canal Road, Jammu (Tawi)-180001, cashable at Jammu post office.

K. K. Gupta
REGISTRAR

UNIVERSITY OF MADRAS NOTIFICATION

University of Madras invites eight sets of applications for the post of "Dean, College Development Council" from candidates below the age of 60 (sixty) years. The term of office will be three years in the first instance extendable for another three years but not beyond the age of 65 years on Scale of Pay Rs. 1700-60-1800-100-2000-125/2-2500 plus other admissible allowances as per University rules.

Qualifications: Ph.D. or Master's degree with 20 years Teaching/Research experience of which at least 10 years should be as Professor/Principal in a College/University/Research Institution. Persons in service of an Institution/University/College should send their applications through proper channel.

Applications should be submitted with the following particulars:

- Name with Address:
- Age with date of birth:
- Academic Qualifications:
- Experience:
- Community:
- Particulars of present and past employment giving names of College, Post held, Present nature of duty, Total experience, etc.

Applications accompanied by certified copies of certificates should be sent to Registrar-in-charge, University of Madras, Madras-600 005 on or before **18-3-1986**.

The cover should be superscribed as "Application for the post of Dean, College Development Council".

REGIONAL ENGINEERING COLLEGE

SILCHAR (ASSAM) 788 016

ADDENDUM

Reference advertisement No. 1/85 for the post of:

- Professor Civil Engg./Mechanical Engg./Applied Mechanics/Training and Placement.
- Asstt. Professor Civil Engg. Electrical Engg. (including Electronics)/Mechanical Engg./Physics/Chemistry.
- Lecturer Civil Engg./Electrical Engg. (including Electronics)/Mechanical Engg./Applied Mechanics/Mathematics/Humanities.

The designation Professor of Training and Placement be read as Professor of Training Placement and Students Welfare.

Higher initial pay may be given to deserving candidates for all the above-mentioned posts.

The candidates who have already applied in response to advertisement No. 1/85 may also send their demand for higher initial, if any, giving the reference of the original applications by 15.3.86.

Pre-b candidates may also apply for the above posts in plain paper (typed) giving full bio-data together with a passport size photograph and L.P.O. of Rs. 10/- within 15.3.86.

The educational qualifications, experience and other conditions will be as appeared in the original advertisement No. 1/85.

PRINCIPAL

UNIVERSITY OF ROORKEE

ROORKEE

Advertisement No. ESTT(A)/25/II/A-86 (Advt.)

Dated : Feb. 12, 1986

Applications on prescribed forms obtainable from the Registrar, either personally or by sending a self-addressed envelope (9" x 4") affixed with 1.10 paise stamps, are invited for the following posts. Higher starting salary could be offered to candidates on their qualifications and experience. Applicant should not generally be above the age of 55 years. Candidates in employment are required to send their application through proper channel. Applications received late/incomplete or without required remittance will not be entertained.

Last date of receipt of applications on prescribed form alongwith application fee of Rs. 10/- (By Bank Draft or Indian Postal Order in favour of the Registrar University of Roorkee, Roorkee) is 20.3.86 and for overseas candidates is 20.4.86.

Sl. No.	Department	Professor (1500-2500)	Reader (1200-1900)	Lecturer (700-1600)
Engineering Departments				
1.	Architecture & Planning	—	1 (Regular) (Ecology)	1 (Regular)+1 (Regular) (1 Art+1 Architecture)
2.	Mechanical & Industrial Engineering	1 (Temporary) (Thermoscience/ Machine Design/ Production)	2 (Regular) : Machine Design and Thermoscience. 1 (Regular) : Welding 1 (TLR) : Welding 1 (Temporary) : Thermoscience/ Machine/Design/ Production, Industrial Engg.	6 (Regular) : Thermoscience, Machine Design, Production Industrial, Welding.
3.	Pulp & Paper	1 (Regular)	—	—
Science Departments				
4.	Humanities & Social Sciences	—	—	1 (Temporary) : History
5.	Bio-Sciences	1 (Regular)	—	—

Note : 1. For Science Engineering Departments U.G.C. prescribed qualifications are applicable. Other details alongwith specialisations etc. will be supplied alongwith application form.

2. Number of posts shown above may change at the time of selection.

3. Only Indian National need apply.

REGISTRAR

UNIVERSITY OF ROORKEE ROORKEE

Advertisement No. Estt (A)/25/III/A-86

Dated : February 12, 1986

Applications on prescribed forms obtainable from the Registrar, either personally or by sending a self addressed envelope (9" x 4") affixed with 1.10 paise stamps, are invited for the following posts. Higher starting salary could be offered to candidates on their qualifications and experience. Applicant should not generally be above the age of 55 years. Candidates in employment are required to send their applications through proper channel. Applications received late/incomplete or without required remittance will not be entertained.

Last date of receipt of application on prescribed form alongwith application fee of Rs. 10/- (by Bank Draft or Indian Postal Order in favour of the Registrar, University of Roorkee, Roorkee) is 20.3.1986 and for overseas candidates 20.4.1986.

AUDIO VISUAL RESEARCH CENTRE

1. Coordinator : One

Scale of Pay : Rs. 1200-50-1300-60-1900

Qualifications : Degree of a recognised Institute of Film making (Direction of Developmental Communication) with 6 years experience in Direction of Television/Film Production Or

(a) Doctor's Degree in Science/Technology. (b) Consistently good academic record with at least first class at Master's or Bachelor's level. (c) 5 years experience in Research/Teaching. Preference will be given to person having some experience in T.V./Film Production and allied fields.

2. Assistant Engineer : One

Scale of Pay : Rs. 850-40-1050-EB-50-1300-60-1420-EB-60-1720.

Qualifications : B. E. in Electronics/ Electrical Engineering or M.Sc. in Physics with Electronics as specialisation. OR Diploma in Radio Engineering or Television with 10 years experience in handling/repairing T.V./Audio Visual Equipment.

3. Cameraman (Grade-I) : One

Scale of Pay : Rs. 770-1600.

Qualifications : Essential : Diploma or Degree in Cinematography from recognised institute.

Desirable 3 years experience in Motion Picture/T.V. (Video) Photography.

4. Cameraman (Grade-II) : One

Scale of Pay : Rs. 650-900* (*Likely to be revised to Rs. 690-1420)

Qualifications : Diploma or Degree in Cinematography from a recognised institute. OR Degree in Mass Communication from a recognised institutions/University. OR Three years Diploma or Degree in Cinematography from a recognised institutions/University. OR Three years diploma in Electronics/T.V./Electrical with 7 years experience.

WORKSHOP

1. Superintendent Workshop : One (Regular)

Scale of Pay : Rs. 1250-2050.

Qualifications : A good Degree or equivalent in Mechanical/Production Engineering followed by a Master Degree with a total of about seven years practical experience in an Industry/Workshop.

2. Assistant Superintendent Workshop : One (Regular)

Scale of Pay : Rs. 850-1720.

Qualifications : A Master's degree in Mechanical/Production/Industrial Engineering with at least one year shop floor experience. Or a Bachelor's degree or equivalent in Mechanical/Production/Industrial Engineering with 5 years experience, out of which at least 2 years should be shop floor experience and minimum of 2 years teaching experience of subjects related to Workshop Technology at University level.

Desirable : Administrative experience of Engineering Workshop.

OTHERS

1. Scientific Officer (Physics) : One (Temporary)

Scale of Pay : Rs. 700-40-1100-50-1600.

Qualifications : Essential : M. E. (In Electronics/Electrical Engg.) OR M.Phil/ M.Tech. Instrumentation with one year practical experience. OR Ph.D. in Experimental Physics with design and Fabrication of measuring instruments.

Desirable : Scientific Officer is required to coordinate the maintenance and development of instrumentation activity of the department, therefore, preference will be given to a candidate having experience of such type of coordination activities.

Note :

1. Other details alongwith specialisations etc. will be supplied alongwith application form.

2. Number of posts shown above may change at the time of selection.

3. Only Indian National need apply.

REGISTRAR

SRI SATHYA SAI INSTITUTE OF HIGHER LEARNING

(Deemed University)

Vidya Giri, Prasanthinilayam-515134 (A.P.)

I

Admission to various undergraduate and postgraduate courses in Science, Arts, Commerce and Social Sciences in the Institute will be made on the basis of an admission test followed by interview to be held at the following centres :

- | | |
|--|--|
| (a) Prasanthinilayam Campus (for men candidates) | |
| (b) Anantapur Campus (for women candidates) | |
| (c) Madras | |
| (d) Bhubaneswar | |
| (e) Bhopal | |
| (f) Bombay | |
| (g) Delhi | |
- For men and women candidates

II

QUALIFICATION FOR ADMISSION

Those seeking admission for five-year integrated course and three year degree courses should have passed Plus 2 of the recognised Board. Those who are appearing for Plus 2 examination before June 1986 are also eligible to apply.

Those who seek admission for postgraduate courses should have passed their first degree courses from any recognised university. Those who are taking the final year of the undergraduate degree course before June 1986 are also eligible to apply.

Admission test for undergraduate courses will be held on 26th May 1986 and for postgraduate courses on 27th and 28th May 1986.

III

The Admission test for the first year of the five-year integrated courses as also of the three year degree courses will have two papers :

- (a) A paper in General English for 1½ hours;
- (b) A three hour paper consisting of three parts of three subject combination such as:
Mathematics, Physics, Chemistry;
Chemistry, Botany, Zoology;
History, Economics, Political Science or Sociology;
Commerce, Accountancy, Economics, Statistics etc.

Those seeking admission for the post-graduate courses will have the following papers:

- (a) A paper in General English for 1½ hours;
- (b) A paper for 2 hours in the subject in which the postgraduate course is sought.

IV

Application form and handbook giving full details of courses and campuses and admission tests will be issued from 1st March 1986 to 15th April 1986 from the above address on payment of Rs. 25/- either as Indian Postal Order or as Bank Draft drawn in favour of Sri Sathya Sai Institute of Higher Learning on State Bank of India, Prasanthinilayam.

The medium of instruction is English.

The Institute is completely residential.

Students admitted to the Institute will be exempt from payment of tuition fees.

The filled in application forms should reach the office of the Registrar before 25th April 1986.

K. Chakravarthi
REGISTRAR